

CQA97079ECG

540nm

GREEN LED

creativeled.com

Features

- * High radiant flux
- * Round emitting chip surface
- * Vertical electrode
- * High driving current
- * Most efficient heat dissipation as backside can be soldered directly to heat sink (non-conductive)
- * RoHs and REACH conform



Optical and Electrical Characteristics @Tambient =25°C

Symbol	Parameter	Min	Typ	Max	Unit	Test conditions
I_F	DC Forward current			1000	mA	
I_{Peak}	Peak Forward current			1100	mA	$T_p < 10\mu sec. ; T=1:100 ; R_{therm} < 100K/W$
V_F	Forward Voltage	2.1		2.5	V	$I_F = 100mA$
I_R	Reverse current	0		2	μA	$V_r = 5V$
λ_{Peak}	Peak Wavelength		540		nm	$I_F = 100mA$
$\Delta\lambda_{0.5}$	Bandwidth of half power		35		nm	$I_F = 100mA$
t_f	Fall time			10	μs	
t_r	Rise time			10	μs	
Φ_E	Total Radiant Flux	10		15	mW	$I_F = 100mA$
I_e	Radiant Intensity		510		mW/sr	$I_F = 100mA$
A	Chip Size		1.33		mm ²	
$2\Phi_{0.5}$	Full Emission Angle		13		deg.	
TK_{VF}	Temp.Coeff. Of Forward Voltage		-0.2		mV/K	
TK_F	Temp. Coeff. Of Radiant Power		-0.4		%/K	
$T_{Operating}$	Operating Temperature	-40		85	°C	
$T_{Storage}$	Storage Temperature	-40		85	°C	
$T_{Soldering}$	Soldering Temperature			245	°C	Reflow
Q_{j-PIN}	Thermal Resistance	10			K/W	
P_{tot}	Total Power Dissipation @ 20mA			2500	mW	

* values only for information

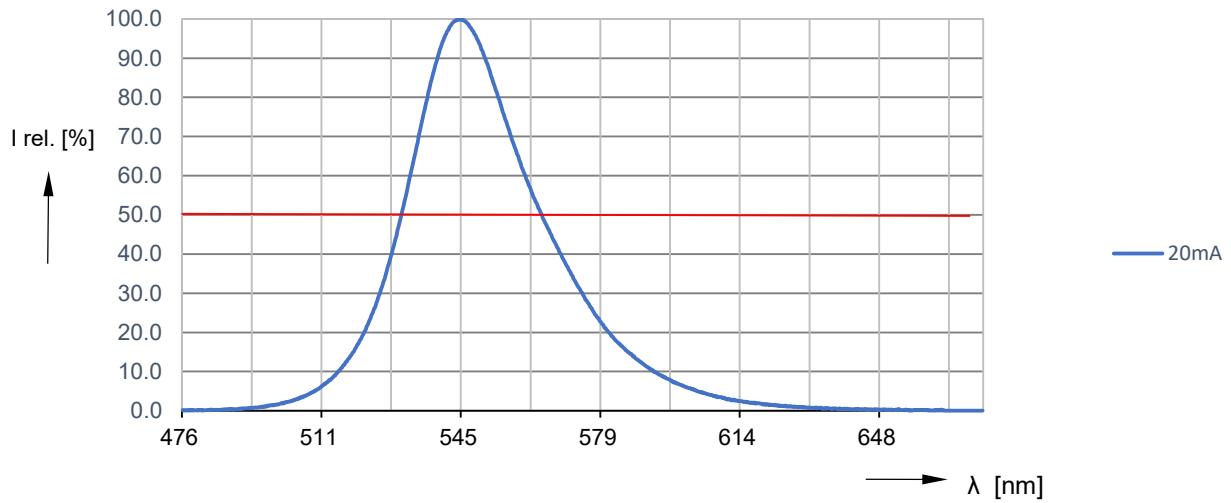
Pls. Contact us for more technical detail information !

CREATIVE LED GMBH reserves the right to make changes at any time in order to improve design and to supply the best product possible, contact us for latest device specification sheets before using.

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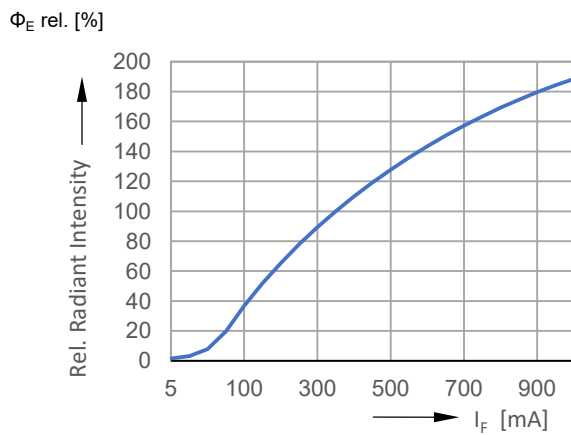
Relative Spectral Emission

@100mA @ $T_{\text{ambient}} = 25^{\circ}\text{C}$



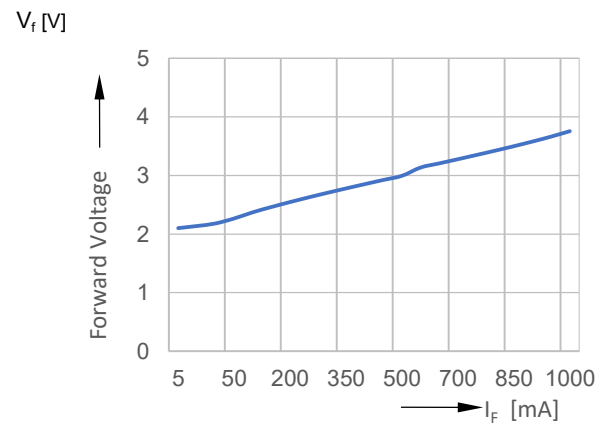
Relative Radiant Flux

@ $T_{\text{ambient}} = 25^{\circ}\text{C}$



Forward Voltage

@ $T_{\text{ambient}} = 25^{\circ}\text{C}$

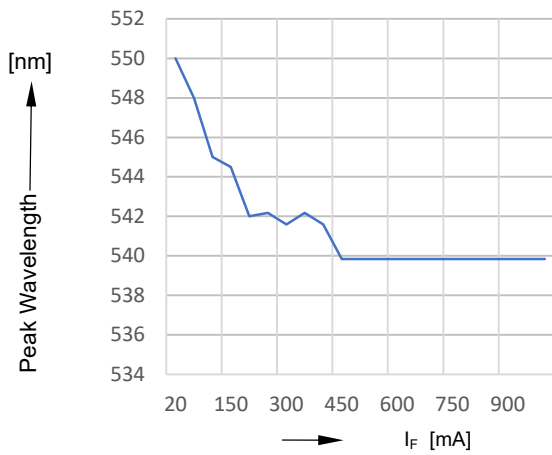


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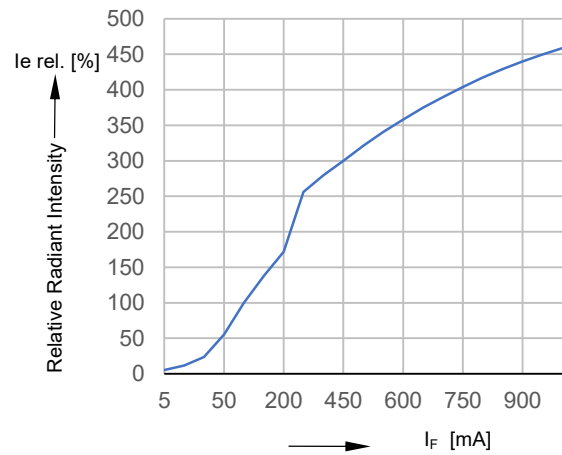
Fwd Current vs. Peak Wavelength

@T_{ambient} = 25°C



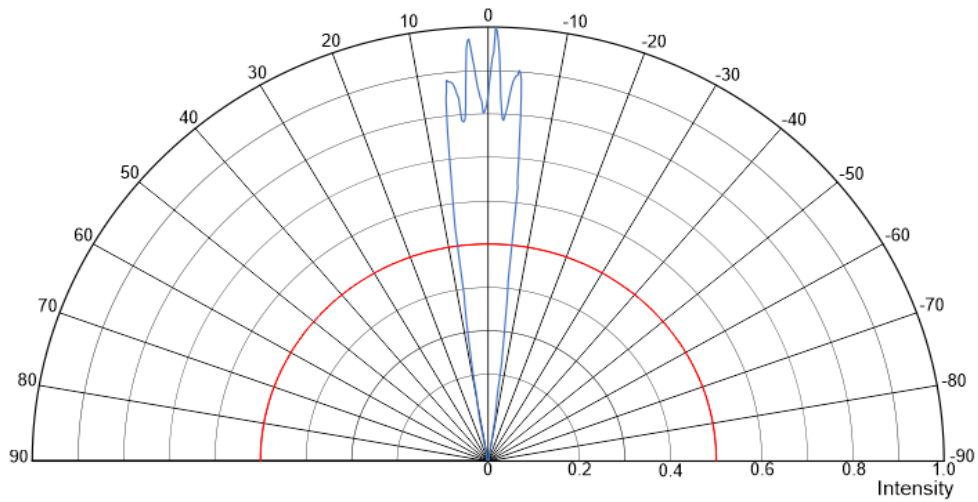
Relative Radiant Intensity

@ T_{ambient} = 25°C



Relative Radiation Angle

@20mA @ T_{ambient} = 25°C



Order information

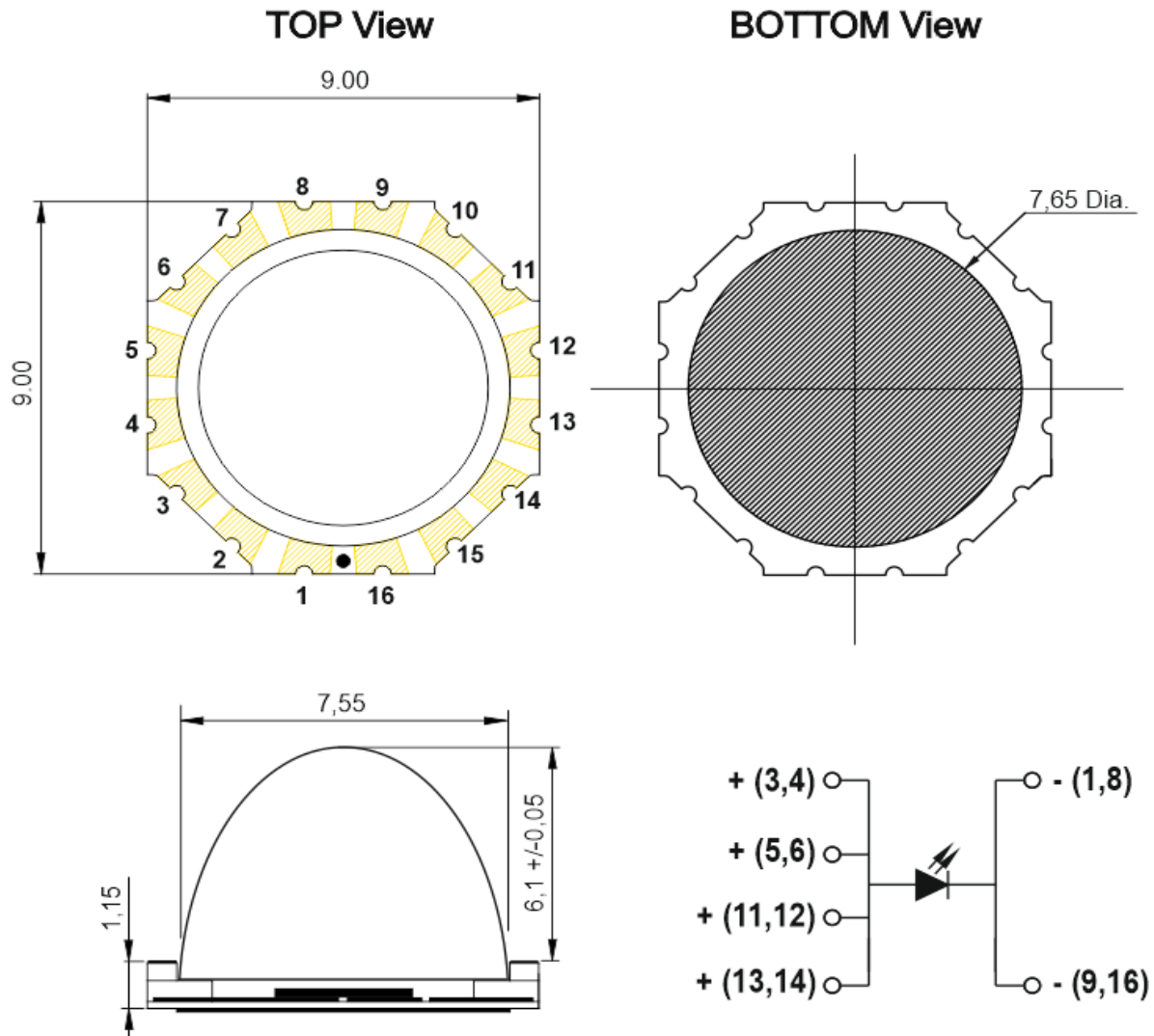
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Bulk (20pcs./Bag) / standard

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Mechanical Drawing



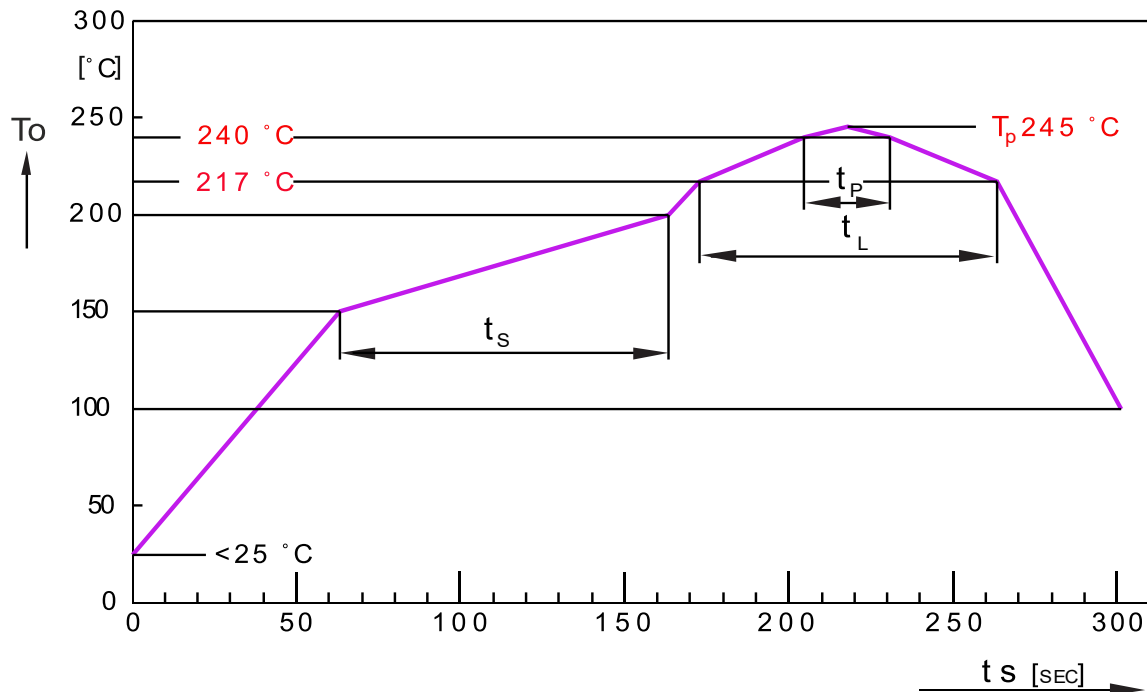
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Reflow Soldering Profile

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Preconditioning: JEDEC Level 3 acc. to JEDEC J-STD-020D.01



PROFIL FEATURES	SYMBOL	PB-FREE (SNAAGCU) ASSEMBLY			UNIT
		MINIMUM	RECOMMENDATION	MAXIMUM	
RAMP-UP RATE TO PREHEAT ⁽¹⁾ 25 °C TO 150 °C			2	3	K/SEC
TIME T _S T _S MIN TO T _S MAX	T _S	60	100	120	SEC
RAMP-UP RATE TO PEAK ⁽¹⁾ T _S MAX TO T _P			2	3	K/SEC
LIQUIDUS TEMPERATURE	T _L		217		°C
TIME ABOVE LIQUIDUS TEMPERATURE	T _L		80	100	SEC
PEAK TEMPERATURE	T _P		240	245/260 ⁽²⁾	°C
TIME WITHIN 5 °C OF THE SPECIFIED PEAK TEMPERATURE	T _{P-5K}	10	20	30	SEC
RAMP DOWN RATE T _P TO 100 °C			3	6	K/SEC
TIME 25 °C TO T _P			300	480 ⁽²⁾	SEC

ALL TEMPERATURES REFERS TO THE CENTER OF THE PACKAGES, MEASURED ON THE TOP OF COMPONENT

(1) SLOPE CALCULATION DT/DT: DT MAX.5 SEC. ; FULFILLMENT FOR THE WHOLE T-RANGE

(2) THESE MAXIMUM VALUES ARE STRONG DEPEND ON THE REFLOW-SOLDERING EQUIPMENT AND APPLICATION